

REMARKS

Reconsideration of the above-identified patent application in view of the present amendment and the following remarks is respectfully requested.

The Office Action of April 6, 2004 rejected claims 1-16 as being obvious over Numazaki et al., U.S. Patent No. 6,144,366, in view of Breed et al., U.S. Patent No. 5,845,000.

This amendment cancels claims 1-16 and adds new claims 17-31. It is respectfully suggested that new claims 17-31 patentably define over Numazaki et al. and Breed et al., whether taken singularly or in combination.

New claim 17 recites an apparatus for determining a characteristic of an occupant of a vehicle. The apparatus comprises means for collecting a first two-dimensional image of an occupant location while the occupant location is subject to a first lighting condition. The first lighting condition includes lighting from ambient light. The apparatus further comprises means for providing a pattern of light onto the occupant location. The pattern of light has an intensity that is less than an intensity of the ambient light. The apparatus still further comprises means for collecting a second two-dimensional image of the occupant location while the occupant location is subject to the first lighting condition and the provided pattern of light. The apparatus also comprises means for generating a third image of the occupant location indicative of a difference between the first and second two-dimensional images and, means for analyzing the pattern of light in the third image to determine a three-dimensional characteristic of the occupant.

It is respectfully suggested that neither Numazaki et al. nor Breed et al. teaches or suggests means for providing a pattern of light onto an occupant location wherein the pattern of light has an intensity that is less than an intensity of the ambient light. Numazaki et al. discloses a lighting unit for emitting a light whose intensity vary in time. (Abstract). Numazaki et al., however, describes this varied intensity as emitting light when a first photo-detection unit 109 is in a photo-detecting state and not emitting light when a second photo-detection unit 110 is in a photo-detecting state. (Col. 11, lines 26-32). Numazaki et al. also suggests the use of near infrared light and teaches “[w]hen the target object to be detected is a human hand, it is preferable to use a device that can emit the near infrared light which is invisible to the human eyes....” (Col. 12, lines 1-9). Thus, Numazaki et al. suggests that the intensity of the emitted light is great enough to be detected by an occupant if not emitted in the near infrared spectrum. Therefore, Numazaki et al. fails to teach or suggest projecting a pattern of light having an intensity less than the intensity of the ambient light. Breed et al. also fails to teach or suggest this feature of claim 17. Therefore, it is respectfully suggested that claim 17 is allowable over Numazaki et al. and Breed et al., whether taken singularly or in combination.

Claims 18-25 depend from claim 17 and are allowable for at least the same reasons as claim 17. Additionally, claims 18-25 are allowable for the specific limitations of each claim.

Specifically, claim 18 recites means to provide the pattern such that the pattern is at least partially distorted when impinging upon surfaces at the occupant location. Claim 18 also recites that the means for analyzing the pattern of light

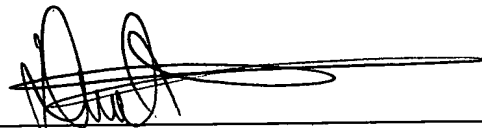
comprises means for analyzing distortions of the pattern to determine the three-dimensional characteristic of the occupant. Neither Numazaki et al. nor Breed et al. teaches or suggests these features of claim 18. Therefore, allowance of claim 18 is respectfully requested.

Claim 26 recites a method for determining a characteristic of an occupant of a vehicle. Claim 26 patentably defines over Numazaki et al. and Breed et al. for reasons similar to claim 17. Claims 27-31 depend from claim 26 and are allowable for at least the same reasons as claim 26.

In view of the foregoing, it is respectfully submitted that the above-identified patent application is in condition for allowance, and allowance of the above-identified patent application is respectfully requested.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Daniel J. Whitman', is written over a horizontal line.

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